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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,134

04/06/2006

Jan Rytter

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EXAMINER

HOOK, JAMES F

ART UNIT

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3754

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,134	Applicant(s) RYTTER, JAN	
	Examiner James F. Hook	Art Unit 3754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 4,7,12,13 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8-11,14-24,26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Denmark on October 31, 2003. It is noted, however, that applicant has not filed a certified copy of the Danish application as required by 35 U.S.C. 119(b).

It is acknowledged that this matter is being handled, and should be available in the application soon, but a full copy has not been received at this time.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3, 5, 6, 8-11, 14-24, 26, and 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The additional language disclosing "no additional water tight layer or layers are covering the outer protective sheath" does not appear in the specification and is believed to be new matter in that such is excluding structure which was not previously set forth as being excludable in the specification and support for a feature like this cannot be gotten from the drawings when the drawings do not clearly set forth that a layer be excluded, especially a specific type

of layer only, therefore such is considered to be new matter. If applicant feels this is in fact recited in the specification then it is requested that in any following response that such be pointed out as to what language of the specification is providing support for this specific claim language, and if in fact there is similar but not exactly the same language that either the claims be amended to recite only the structure supported by the specification or that the specific language of the current claim be added to the specification to provide support without adding new matter to the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 6, 8-11, 14-24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glejbol (559) in view of Greco, De Ganahl and Braad. The reference to Glejbol discloses the recited flexible pipe for transporting fluid comprising a liner 2,3, an armoring layer 5,6, a water impermeable layer 10, an outer protective sheath formed from helically wound composite wires in two layers that are oppositely wound 7,8 where the composite wires are formed of bundles of fibers that are seen to be essentially a flattened tape shape, and an outer protective layer can also be provided 11, the bundles of fibers or chords form the protective layers and can include titanium,

Art Unit: 3754

there is a binding material also provided with the protective layers, where the chords are formed from multiple threads, the binding material can be a thermoplastic polymer, and the method of forming the pipe is given. Glejbol also discloses that the number of armor layers can include several which suggests that it is known to use more than one layer of armor and the references below teach that it is old and well known to form armor layers with opposite wind angles. It is also disclosed in Glejbol that the hose is designed such that the outermost layer and the two composite fiber layers are designed to be contacted by seawater which sets forth that the hose is to be used in a subsea or marine environment, and that clearly the outer protective layer 11 is not an additional water tight layer, thereby meeting the new claim language. The reference to Glejbol discloses all of the recited structure with the exception of forming the bundles of fibers that can melt together locally to hold the two layers together and that the armoring layer is not chemically bonded to the inner liner or intermediate layers but is able to move. The reference to Greco discloses that it is old and well known in the art to form composite pipe layers of wound bundles of fibers to form yarns where the fibers used can include nylon, polyester, KEVLAR, wire or the like, where the term wire inherently would include metal wires since that is what is known in the art to be the material used to make wires, and polyethylene fibers can be wound in to allow for a second strand of different material which has a lower melting point and upon heating is softened which is considered melting and inherently would lead to the fibers of the crossing layers to locally be held together, and since the fibers are provided in a wound yarn it can be seen that areas will be untied together where the yarns do not meet, and such are

Art Unit: 3754

formed around the periphery of the yarn, where the intersecting portions of fiber bundles will adhere to one another inherently as well. It would have been obvious to one skilled in the art to modify the fiber yarn protective layer of Glejbol by providing such with polyethylene fibers to allow such to tie the layers together by allowing for locally holding the yarn layers where the reinforcing yarns intersect one another due to the softening of the polyethylene fibers as suggested by Greco where such would insure the fiber layers stay in the proper place during assembly and use thereby making the hose inherently stronger. It is considered inherent that the combination of references would lead to a structure that inherently would allow for shear deformation between protective layers in the untied areas. The reference to Braad discloses the recited flexible pipe for transporting fluid comprising a liner 3, an armoring layer 4, an outer protective sheath formed from helically wound wires in two layers that are oppositely wound 5,6, and an outer protective layer can also be provided 7, and the method of forming the pipe is given, where the hose layers are non-bonded. It would have been obvious to one skilled in the art to form the pipe structure of Glejbol such that the layers are non-bonded as suggested by Braad, where such would inherently provide more flexibility if the layers could move with respect to one another, and it is taught that hoses of this structure are formed with layers non-bonded, which would include chemically non-bonded as well. The reference to Glejbol also fails to disclose that the outer protective sheet formed by the oppositely wound layers form the outermost layer of the hose. The reference to De Ganahl discloses that it is old and well known in the art to form the outermost layer of a pipe either of a counter wound tape which forms the outermost

Art Unit: 3754

solid layer. It would have been obvious to one skilled in the art to modify the outermost protective layer 9 of Glejbol to be formed of counter wound tapes to form the outermost protective layer as suggested by De Ganahl where such is a known way to provide an outer protective layer to a reinforced hose structure as such is a known equivalent way to form the outermost layer of a hose for protective purposes.

Claims 1-3, 5, 6, 8-11, 14-24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glejbol (559) in view of Greco, Atwell, and Braad. The reference to Glejbol discloses the recited flexible pipe for transporting fluid comprising a liner 2,3, an armoring layer 5,6, a water impermeable layer 10, an outer protective sheath formed from helically wound composite wires in two layers that are oppositely wound 7,8 where the composite wires are formed of bundles of fibers that are seen to be essentially a flattened tape shape, and an outer protective layer can also be provided 11, the bundles of fibers or chords form the protective layers and can include titanium, there is a binding material also provided with the protective layers, where the chords are formed from multiple threads, the binding material can be a thermoplastic polymer, and the method of forming the pipe is given, including the marine environment use, not having an additional water tight layer where layer 11 is permeable to water, and that more than two armor layers exist. The reference to Glejbol discloses all of the recited structure with the exception of forming the bundles of fibers that can melt together locally to hold the two layers together and that the armoring layer is not chemically bonded to the inner liner or intermediate layers but is able to move. The reference to Greco discloses that it is old and well known in the art to form composite pipe layers of

Art Unit: 3754

wound bundles of fibers to form yarns where the fibers used can include nylon, polyester, KEVLAR, wire or the like, where the term wire inherently would include metal wires since that is what is known in the art to be the material used to make wires, and polyethylene fibers can be wound in to allow for a second strand of different material which has a lower melting point and upon heating is softened which is considered melting and inherently would lead to the fibers of the crossing layers to locally be held together, and since the fibers are provided in a wound yarn it can be seen that areas will be untied together where the yarns do not meet, and such are formed around the periphery of the yarn, where the intersecting portions of fiber bundles will adhere to one another inherently as well. It would have been obvious to one skilled in the art to modify the fiber yarn protective layer of Glejbol by providing such with polyethylene fibers to allow such to tie the layers together by allowing for locally holding the yarn layers where the reinforcing yarns intersect one another due to the softening of the polyethylene fibers as suggested by Greco where such would insure the fiber layers stay in the proper place during assembly and use thereby making the hose inherently stronger. It is considered inherent that the combination of references would lead to a structure that inherently would allow for shear deformation between protective layers in the untied areas. The reference to Braad discloses the recited flexible pipe for transporting fluid comprising a liner 3, an armoring layer 4, an outer protective sheath formed from helically wound wires in two layers that are oppositely wound 5,6, and an outer protective layer can also be provided 7, and the method of forming the pipe is given, where the hose layers are non-bonded. It would have been obvious to one

Art Unit: 3754

skilled in the art to form the pipe structure of Glejbol such that the layers are non-bonded as suggested by Braad, where such would inherently provide more flexibility if the layers could move with respect to one another, and it is taught that hoses of this structure are formed with layers non-bonded, which would include chemically non-bonded as well. The reference to Glejbol also fails to disclose that the outer protective sheet formed by the oppositely wound layers form the outermost layer of the hose. The reference to Atwell discloses that it is old and well known in the art to form the outermost layer of a pipe either of a counter wound tape which forms the outermost layer which can be embedded in and forming the outermost wall. It would have been obvious to one skilled in the art to modify the outermost oppositely wound layers of Glejbol to be formed of counter wound tapes to form the outermost protective layer as suggested by Atwell where such is a known way to provide an outer protective layer to a reinforced hose structure as such is a known equivalent way to form the outermost layer of a hose for protective purposes.

Response to Arguments

Applicant's arguments filed February 21, 2011 have been fully considered but they are not persuasive. With respect to the Glejbol reference (559), in paragraph [0052] it states that layer 10 is impermeable because all other layers outside of it are exposed to the surrounding environment which teaches that layers 7 and 8 are permeable to seawater, as well as the fact that layer 11 is not an additional layer that is water tight, and further that the hose is used in a marine environment. Since the terms

Art Unit: 3754

intermediate layers or membranes are optional, then the armor layer only needs to be not bonded to the inner liner, and the reference to Braad as discussed in the rejections above teaches that the layers are unbonded, see for example claim 1. With respect to the arguments directed at Greco, it appears that the arguments are directed at Greco not teaching the unbonded limitation for the armor layers but this reference was not being used to teach this feature but rather such was taught by the reference to Braad therefore this argument is not persuasive when directed at Greco. Greco is being used merely to teach the features directed at the fiber bundle layer and features of that layer such as localized connection from one fiber bundle to the other, and is used to modify the fiber bundle layers 7,8 of Glejbol (559) which is the same field of endeavor, a fiber bundle reinforcing layer of a hose.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references to Glejbol (196), Everling, Remi, and Cheetham disclosing state of the art hoses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James F. Hook/
Primary Examiner, Art Unit 3754

JFH